PTO/SB/08B

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

FEB 1 0 2006 nder the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number. Complete if Known Substitute for m 1449B/PTO Application Number 10/541,013 INFORMATION DISCLOSURE Filing Date June 28, 2005 STATEMENT BY APPLICANT Eric Henderson First Named Inventor **Group Art Unit** 1641 (use as many sheets as necessary) **Examiner Name** Unknown 28 Attorney Docket Number 016348-9048-US00 Sheet of

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.				
RQ		"Microbeam Mass Spectrometry" Chemical Science and Technology Laboratory, Surface and Microanalysis Science Division http://www.cstl.nist.gov/div837/Divisoin/expertise/ions/masspec1.htm 7/18/2002.				
		Abstracts of Papers Part I, 214th "Abstract 027" ACS National Meeting American Chemical Society, September 1997, 2 pgs.				
		ALLISON, D., et al., "Direct atomic force microscopy imaging of EcoRI endonuclease site specifically bound to plasmid DNA molecules" PNAS USA, 1996, 93:8826-8829.				
	·	ALLISON, D., et al., "Mapping Individual Cosmid DNAs by Direct AFM Imaging" Genomics, 1997, 41:379-384.				
		ALVES, et al., "Atomic scale imaging of alkanethiolate monolayers at gold surfaces with atomic force microscopy: J. Am. Chem. Soc., February 1992, 114(4):1222-1227.				
		AMRO, et al., "Patterning surfaces using tip-directed displacement and self-assembly" Langmuir, 2000, 16:3006-3009.				
		ANWANDER, et al., "Surface characterization and functionalization of MCM-41 silicas via silazane silylation" J. Phys. Chem. B., 2000, 104:3532-3544.				
		ARNTZ, et al., "Label-free protein assay based on a nanomechanical cantilever array" Nanotechnology, 14 (2003) 86-90.				
1		AUSUBEL, F.M., et al. "Current Protocols in Molecular Biology" 1993 ed. Vol. 1&2, 1993, Green Publishing Associates and Wiley-Interscience.				

Examiner		Date	52 Pro/AG	
Signature	9	Considered	10/19/00	
	7 77			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number. Substitute for form 1449B/PTO INFORMATION DISCLOSURE

STATEMENT BY APPLICANT

(use as many sheets as necessary) Sheet

	Complete if Known	
Application Number	10/541,013	
Filing Date	June 28, 2005	
First Named Inventor	Eric Henderson	
Group Art Unit	1641	
Examiner Name	Unknown	
Attomey Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.				
a	BAILEY, C.P., et al., Cationic oligonucleotides can mediate specific inhibition of gene expression in Xenopus oocytes" Nuc. Acids Res., 1998, 26(21):4860-4867.				
	BAIN, et al., "Modeling organic surfaces with self-assembled monolayers" Agnew. Chem. Int. Ed. Engl., 1989, 28(4):506-512.				
	BASELT, D.R., et al., "A biosensor based on magnetoresistance technology" Biosens. Bioelectorn, 1998, 13(7-8):731-739.				
	BEDOUELLE, H., "Reagentless fluorescent Immunosensors" Antibody Engineering, IBC's 13th International Conference, December 2, 2002.				
	BELAUBRE, P. et al., "Fabrication of biological microarrays using microcantilevers". Applied Physics Letters,. 5 May 2003, 82(18):3122-3124.				
	BENSIMON, A., et al., "Alignment and sensitive detection of DNA by a moving interface" Science, 1994, Sep 30; 265(5181):2096-2098 [PMID 7522347] Abstract.				
	BERGGREN, et al., "Microlithography by using neutral metastable atoms and self-assembled monolayers" Science, September 1995, 269(5228):1255-1257.				
	BERNARD, et al. "Printing patterns of proteins" Langmuir The ACS Journal of Surfaces and Colliod, April 1998, 14(9):2225-2229.				
V	BINGGELI, et al., "Influence of capillary condensation of water on nanotribology studied by force microscopy" Appl. Phys. Lett., July 1994, 65(4):415-417.				

Examiner Signature	(4)	Date Considered	12/10/06	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO					Complete if Known	
				Application Number	10/541,013	
INFORMATION DISCLOSURE				Filing Date	June 28, 2005	
STATE	STATEMENT BY APPLICANT			First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	3	of	28	Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine; journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
a C	BINNING, et al., "Surface studies by scanning tunneling microscopy" Phys. Rev. Lett., 1982, 49(1):57-61.
	BINNING, G., et al., "Atomic force microscope Phys. Rev. Lett., 1986, 56(9):930-933.
	BISHOP, et al., "Self-assembled monolayers: recent developments and applications" Colloid & Interface Science, February 1996, 1:127-136.
	BOTTOMLEY, L., "Scanning probe microscopy" Anal. Chem., June 1998, 70(12):425R-475R.
	BRANDOW, S., et al., "Metal pattern fabrication using the local electric field of conducting atomic force microscope probe" J. Vac. Sci. Technol., May/June 1997, 15(3):1455-1459.
	BRENNER, S., et al., "Gene expression analysis by massively parallel signature sequencing (MPSS) on microbead arrays" Nat. Biotechnol 2000, June 18(6):630-634, 2000.
	BRODY, E., and Gold, L., "Aptamers as therapeutic and diagnostic agents" Molecular Biotechnology, 2000, 74:5-13.
	BRUCKBAUER, et al., "Writing with DNA and Protein Using a Nanopipet for Controlled Delivery" JACS, 2002, A-B.
	BULYK, et al., "Quantifying DNA-protein interactions by double-stranded DNA arrays" Nature Biotechnology, June 1999, 17:573-577.

			1 1
Examiner		Date	2/10/16
Signature	1/4/20	Considered	2/13/00

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTO/SB/08B

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Complete if Known

Substitute for form 1449B/PTO INFORMATION DISCLOSURE				Complete if Known		
				Application Number	10/541,013	
				Filing Date	June 28, 2005	
STATEMENT BY APPLICANT			ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	4	of	28	Attorney Docket Number	016348-9048-US00	

	 OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the anticle (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
A	BUSCH, K.L., "Desorption Ionization Mass Spectrometry," J. Mass Spectrometry (1995) 30:233-240
	BUSTAMANTE C., et al., "Circular DNA Molecules Imaged in Air by Scanning Force Microscopy" Biochemistry, 1992, 31:22-26
	BUSTAMANTE, C., et al., "Biochemical and structural applications of scanning force microscopy" Curr. Opin. Struct. Biol., 1994 4(5):750-760.
	CARR, et al., "High-selectivity pattern transfer process for self-assembled monolayer electron beam resists" J. Vac. Sci. Technol., May/June 1997, 15(3):1446-1450.
	CHENG, et al., "Preparation and hybridization analysis of DNA/RNA from E. coli on microfabricated bioelectronic chips" Nature Biotechnology, 1998, 16:541-546
	CHRISEY et al, "Fabrication of patterned DNA surfaces" Nucleic Acids Research, (10/1996)24(15):3040-3047.
	CLARK, M.W. et al., "Nanotechnology tools for functional proteomics analysis" American Biotechnology Laboratory, March 2001, 16-18.
	COLAS, et al., "Genetic selection of peptide aptamers that recognize an inhibit cyclin-dependent kinase 2", Nature, April 1996 380(11):548-550.
7	COLLINS, et al., "Engineering Carbon Nanotubes and Nanotube Circuits Using Electrical Breakdown" Science, April 2001, 292(5517):706-799.

Examiner Signature	(sh Da	Date Considered 12/18/06	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for	Солт 1449B/PTO				Complete if Known	
Substitute to	ionii 1449D/F IO			Application Number	10/541,013	
INFOR	MATIO	N DISCL	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT			ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	5	of	28	Attorney Docket Number	016348-9048-US00	·

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.					
0	COLLINS, et al., "Nanotube Device" Science, 3 October 1997, 278:100-103.					
	COLVIN, et al. "Semiconductor nanocrystals covalently bound to metal surfaces with self-assembled monolayers" J. Am. Chem. Soc., 1992, 114:5221-5230.					
	CUI, Y, et al., "Nanowire nanosensors for highly sensitive and selective detection of biological and chemical species" Science, 2001, 293, 1289-1292.					
	DAI, H, et al., "Controlled chemical routes to nanotube architectures" Physics and Devices, J. Phys. Chem B, 1999, 103:11246-11255.					
	DAI, H, et al., "Probing electrical transport in nanomaterials: conductivity of individual carbon nanotubes" Science, 1996, 272(5261):523-526.					
	DAMMER, et al., "Binding strength between cell adhesion proteoglycans measured by atomic force microscopy" Science, 1995, 267:1173-1175.					
	DAMMER, et al., "Specific antigen/antibody interactions measured by force microscopy" Biophys. J., 1996, 70:2437-2441.					
	DELAMARCHE, E., "Immobilization of antibodies on a photoactive self-assembled monolayer on gold," Langmuir (1996) 12:1997-2006					
1	DING, Y., OKA, T., et al., "Near-field stimulated TOF nanometric surface mass spectroscopy: characterization of Nano-localized surfaces" Joint International Meeting - 200th Meeting of the Electrochemical Society, Inc., 52nd Annual Meeting of the International Society of Electrochemistry, San Francisco, California (2001).					

				/
Examiner Signature	(//)	Date Considered	12/10/	0-6

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO					Complete if Known	
Substitute for form 1447 by 10				Application Number	10/541,013	
INFORMATION DISCLOSURE				Filing Date	June 28, 2005	
STATE	MENT E	BY APPL	ICANT	First Named Inventor	Eric Henderson	
Q2	STATEMENT DI ALI ELGINA			Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	6	of	28	Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
A	DING, Y., RUGGERO, M. et al., "Development of UHV-STM/TOF hybrid mass analyzer system for nano-characterization of metal silicide surfaces" 198th Meeting of the Electrochemical Society, Phoenix, Arizona (2000).
	DeRISI, et al., "Exploring the Metabolic and Genetic Control of Gene Expression on a Genomic Scale" Science, October 1997, 278:680-686.
	DONG, Y. and SHANNON, C., "Heterogeneous Immunosensing Using Antigen and Antibody Monolayers on Gold Surfaces with Electrochemical and Scanning Probe Detection" <i>Anal. Chem.</i> , 2000, 72:2371-2376.
	DONTHA, N., et al., "Development of sub-micron patterned carbon electrodes for immunoassays" J. Pharm. Biomed. Analysis. (February 1999) 19:83-91.
	DONTHA, N., et al., "Generation of Biotin/Avidin/Enzyme Nanostructures with Maskless Photoligography" Anal. Chem., 1997, 69: 619-2625
	DUBOIS, L. et al., "Synthesis, Structure, and Properties of Model Organic Surfaces" Annu. Rev. Phys. Chem., 1992, 43:437-463.
	DURBIN, S., FEHER, G., "Protein crystallization" Annual Review of Phys Chemistry. 1996, 47:171-204.
	FALVO, M.R., et al., "Bending and buckling of carbon nanotubes under large strain" Nature, 1997, 389:582-584.
X	FAN, S., et al., "Self-oriented regular arrays of carbon nanotubes and their functional devices" Science, 1999, 283, 512.

Examiner Signature	YX	Date Considered	12/10/06
	 7 //		,

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE					Complete if Known	
				Application Number	10/541,013	
				Filing Date	June 28, 2005	
STATE	STATEMENT BY APPLICANT			First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	7	of	28	Attorney Docket Number	016348-9048-US00	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS							
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.						
a	FANG, et al., "Membrane Protein Microarrays" JACS, 2002, 124(11):2394-2395.						
	FARAJIAN, A.A., et al., "Nonlinear Coherent Transport Through Doped Nanotube Junctions" Physical Review, June 21, 1999, 82(25):5084-5087.						
	FEIGON, J. "DNA triplexes, quadruplexe, and aptamers" Clin. Chem., 1994, 40(4):647-647.						
	FLORIN, E., et al., "Adhesion forces between individual ligan-receptor pairs" Science, 1994, 264:415-417.						
	FODOR, S., et al., "Light-directed spatially addressable parallel chemical synthesis" Science 1991, 251: 767-773.						
	FODOR, S., et al., "Multiplexed biochemical assays with biological chips" Nature, 1993, 364:555-557.						
	FRISBIE, C.D., et al., "Functional group imaging by chemical force microscopy" Science, 1994, 265:2071-2074.						
	FRITZ, J., et al., "Translating biomolecular recognition into nanomechanics" Science, 2000, 316-318.						
7	FRITZSCHE, W., et al., "Application of Atomic Force Microscopy to Visualization of DNA, Chromatin and Chromosomes" Critical Reviews in Eukaryotic Gene Expression, 1997, 7(3):231-240.						

Examiner Signature	(di	182	Date Considered	12	10/	06
		/				

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO					Complete if Known	
Substitute for form 14476/F TO				Application Number	10/541,013	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date	June 28, 2005	
				First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	Sheet 8 of 28			Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
Examiner Initials			Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.				
	X		FRITZSCHE, W., et al., "Chicken Erythrocyte Nucleosomes Have a Defined Orientation along the Linker DNA-A Scanning Force Microscopy Study" Scanning, 1997, 19:42-47.				
			FRITZSCHE, W., et al., "Mapping elasticity of rehydration metaphase chromosomes by scanning force microscopy" Ultramicroscopy, 1997, 69:191-200.				
			FRITZSCHE, W., et al., "Ribosome substructure investigated by scanning force microscopy and image processing" Journal of Microscopy, 1998, 189, Pt 1, 50-56.				
			FUHRER, et al., "Crossed Nanotube Junctions" Science, 21 April 2000, 288:494-497.				
			FUJIHIRA, et al., "Effect of capillary force on friction force microscopy: a scanning hydrophilicity microscope" Chemistry Letters, July 1996, 7:499-500.				
		·	GANTZER, C. et al., "Detection of infectious enteroviruses, enterovirus genomes, somatic coliophages, and bacteroides fragilis phages in treated wastewater," Appl. Environ. Microbiol. (1998) 64:4307-4312				
			GAUNTT, C. and HUBER, S., Front Biosci. (2003) 8:E23				
			GILLEN, G., BENNETT, J., et al., "Molecular imaging secondary ion mass spectrometry for the characterization of patterned self-assembled monolayers on silver and gold" <i>Anal. Chemistry</i> , 1994, 66:2170-2174.				
√×,			GIRAULT, S., CHASSAING, G. et al, "Coupling of MALDI-TOF mass analysis to the separation of biotinylated peptides by magnetic streptavidin beads" Anal. Chemistry 1996, 68:2122-2126.				

Examiner Signature	Y	Date Considered	12/10/08	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE					Complete if Known	
				Application Number	10/541,013	
				Filing Date	June 28, 2005	
STATEMENT BY APPLICANT			ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	9	of	28	Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.					
a	2	GRABAR, et al., "Preparation and characterization of Au colloid monolayers" Anal. Chem., 1995, 67(4):735-743.					
		HAAB, et al., "Protein microarrays for highly parallel detection and quantitation of specific proteins and antibodies in complex solutions" Genome Biology, 2001, 2(2)0004.1-0004.13.					
		HANSMA, H.G., et al., "Atomic force microscopy of long and short double-stranded, single-stranded and triple-stranded nucleic acids" Nuc. Acids Res., 1996, 24(4):713-720.					
		HANSMA, H.G., et al., "Recent advances in atomic force microscopy of DNA" Scanning 1993, 15(5):296-9.					
		HANSMA, H.G., SINSHEIMER, R.L., et al., "Atomic force microscopy of single- and double-stranded DNA" Nucleic Acids Research 1992, 20:3585-90.					
		HANSMA, P.K., et al., "Tapping mode atomic force microscopy in liquids" Appl. Phys. Lett., 1994, 64(13):1738-1740.					
		HELLER, et al., "Discovery and analysis of inflammatory disease-related genes using cDNA microarrays" PNAS USA, 1997, 94: 2150-2155.					
		HENDERSON, E., "Atomic force microscopy of conventional and unconventional nucleic acid structures" Journal of Microscopy, 1992, 77-84.					
1		HENDERSON, E., "Imaging and nanodissection of individual supercoiled plasmids by atomic force microscopy" Nuc. Acids Res., 1992, 20(3):445-447.					

		, ///		
Examiner Signature	Ch	4kd	Date Considered	12/18/06

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for f	orm 1449B/PTO			Complete if Known		
3003111010 101 1	0,111.14.75.11.10			Application Number	10/541,013	0
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT (use as many sheets as necessary)			ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
				Examiner Name	Unknown	
Sheet	10	of	28	Attorney Docket Number	016348-9048-US00	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.				
	HENDERSON, E., "Imaging of Living Cells by Atomic Force Microscopy" Progress in Surface Science, May 1994, 46(1):39-60.				
	HENDERSON, E., "Molecular force detection and spectroscopy with the atomic force microscope" Science Progress, 1998, 81(2):141-151.				
	HENDERSON, E., et al., "Actin Filament Dynamics in Living Glial Cells Imaged by Atomic Force Microscopy" Science, 1992, 257:1944-1946.				
	HENDERSON, E., et al., "New Ribosome Structure" Science, 1984, 255:510-512.				
	HENDERSON, E., et al., "Telomeric DNA oligonucleotides form novel intramolecular structures containing guanine-guanine base pairs" Cell, 1987, 51(6):899-908.				
	HENDERSON, et al., "A method for gold coating experimental detector beampipes" httb://www.Ins.comell.edu/public/CBN/1999/CBN99-7/cbn99-7.pdf, 1999.				
	HILLER, et al., "Microarrayed allergen molecules: diagnostic gatekeepers for allergy treatment" FASEB, 2002, 16:414-416.				
	HINTERDORFER, P. et al., "Detection and localization of individual antibody-antigen recognition events by atomic force microscopy" PNAS, 1996, 93:3477-3481.				
7	HOH, J.H., and HANSMA, P.K., "Atomic force microscopy for high resolution imaging in cell biology" <i>Trends in Cell Biology</i> , 1992, 2:208-213.				

			\sim			<i>`</i>	
Examiner Signature	(In	\mathcal{J}_{λ}		Date Considered	121	10/	06
			·				

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO					Complete if Known	
Soosman in t	UMM 1447DA 10			Application Number	10/541,013	
INFORMATION DISCLOSURE				Filing Date	June 28, 2005	
STATEMENT BY APPLICANT			ICANT	First Named Inventor	Eric Henderson	
V				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet 11 of 28		Attorney Docket Number	016348-9048-US00			

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.					
	HOH, J.H., et al., "Atomic force microscopy and dissection of gap junctions" Science, 1991, 1405-1408.					
	HOH, J.H., et al., "Quantized adhesion detected with the atomic force microscope" J. Am. Chem. Soc., 1992, 114:4917-4918.					
	HOLLAND, Vacuum Deposition Of Thin Films (Wiley, New York, NY, 1956)					
	HONG, et al., "A new tool for studying the in situ growth processes for self-assembled monolayers under ambient conditions" Langmuir, 1999, 15:7879-7900.					
	HONG, et al., "Multiple ink nanolithography: toward a multiple-pen nano-plotter" Science, 1999, 286:523-525.					
	HONG, S. et al. "A Nanoplotter with Both Parallel and Serial Writing Capabilities" Science, June 9, 2000, 288:1808-1811.					
	HOVIS, et al., "Cyloaddition chemistry and formation of ordered organic monolayers on silicone (001) surfaces" Surface Science, 1998, 402-404, pgs. 1-7.					
	HOVIS, et al., "Structure and bonding of ordered organic monolayers of 1,5-cyclooctadiene on the silicon (001) Surface" J. Phys. Chem. B., 1997, 101: 9581-9585.					
1	HU, et al., "Imaging the condensation and evaporation of molecularly thin films of water with nanometer resolution" Science, 1995, 268(5208):267-269.					

	/ /	- /			<u>, </u>		
Examiner Signature		IX.	Date Considered	12/	10/	06	
		7 7					

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO				Complete if Known		
· ·				Application Number	10/541,013	
INFORMATION DISCLOSURE				Filing Date	June 28, 2005	
STATEMENT BY APPLICANT (use as many sheets as necessary)			ICANT	First Named Inventor	Eric Henderson ·	
				Group Art Unit .	1641	
)	Examiner Name	Unknown	
Sheet	12	of	28	Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.						
	HUCK, et al., "Patterned polymer multilayers as etch resists" Langmuir, 1999, 15:6862-6867.						
	IVANISEVIC, et al., "Dip-Pen Nanolithography on Semiconductor Surfaces" J. Am. Chem. Soc., 2001, 123:7887-7889.						
	IYER, et al., "The Transcription Program in the Response of Human Fibroblasts to Serum" Science, 1999, 283(5398):83-87.						
	JACKMAN, et al., "Fabrication of submicrometer features on curved substrates by microcontact printing" Science, 1995, 269: 664-666.						
	JAMES, et al., "Patterned protein layers on solid substrates by thin stamp microcontact printing" Langmuir, 1998, 14:741-744.						
	JANES, et al., "Electronic conduction through 2D arrays of nanometer diameter metal clusters" Superlattices and Microstrucures, 1995, 18(4):275-282.						
	JASCHKE, et al., "Deposition of organic material by the tip of a scanning force microscope" Langmuir, 1995, 11:1061-1064.						
	JIN, X., UNERTL, W., "Submicrometer modification of polymer surfaces with a surface force microscope" Applied Physics Letters, 1992, 61(6): 657-659.						
	JONES, V., et al., "Microminiaturized Immunoassays Using Atomic Force Microscopy and Compositionally Patterned Antigen Arrays 66" Anal. Chem., 1998, 70(7):1233-1241.						

				i
Examiner Signature	Cols.	UW.	Date Considered	2/10/06
		,		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Complete if Known

Application Number 10/541,013

INFORMATION DISCLOSURE Filing Date June 28, 2005

STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 13 of 28

	Complete if Known	
Application Number	10/541,013	
Filing Date	June 28, 2005	
First Named Inventor	Eric Henderson	
Group Art Unit	1641	
Examiner Name	Unknown	
Attorney Docket Number	016348-9048-US00	

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
a	2	KARPOVICH, et al., "Direct measurement of the adsorption kinetics of alkanethioilate self-assembled monolayers on microcrystalline gold surface" Langmuir, 1994, 10:3315-3322.
		KIM, et al., "Nanotube nanotweezers" Science, 10 December 1999, 286:2148-2150.
		KNEZEVIC et al., "Proteomic profiling of the cancer microenvironment by antibody arrays" Proteomics, 2001, 1:1271-1278.
		KOCHANEK, et al., "Transcriptional silencing of human ALU sequences and inhibition of protein binding in the box B regulatory elements by 5'CG3" methylation" FEBS Lett., 1995, 360(2):115-120 [PMID 7875314] Abstract.
		KOMEDA, et al., "Octadecyltrichlorosilane self-assembled-monolayer islands as a self-patterned-mask for HF etching of SiO ₂ on Si" J. Vac. Sci. Technol A., 1998, 16(3):1680-1685.
		KONG, et al., "Nanotube Molecular Wires as Chemical Sensors" Science, 28 January 2000, 287:622-625.
		KUMAR, et al., "The use of self-assembled monolayers and a selective etch to generate patterned gold features" J. Am. Chem. Soc., 1992, 114:9188-9189.
		LAHIRI, et al., "Patterning ligands on reactive SAMs by microcontact printing" Langmuir, 1999, 15:2055-2060.
1		LAIBINIS et al., "a-terminated alkanethiolate monolayers on surfaces of copper, silver, and gold have similar wettabilities." J. Am. Chem. Soc., 1992, 114: 1990-1995.
V		

Examiner Signature Date Considered 12/10/06

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for f	orm 1449B/PTO				Complete if Known	
Judginuit ioi i	JIII 1447051 10			Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT				First Named Inventor	Eric Henderson	
Q 21.122				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	14	of	28	Attorney Docket Number	016348-9048-US00	

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
A	P	LAL, R. and JOHN, S.A., "Biological applications of atomic force microscopy" Am J. Physiology, 1994, 266(1):1-21.
		LANIO, T., et al., "PCR-based random mutagenesis method using spiked oligonucleotides to randomize selected parts of gene without any wild-type background" <i>Biotechniques</i> , 1998, 25(6):958-965.
		LEE, et al., "Nanometer-scale lithography on H-passivated Si(100) by atomic force microscope in air" J. Vac. Sci. Technol. A., 1997, 15(3):1451-1454.
		LEE, G. et al. "Direct measurement of the forces between complementary strands of DNA" Science, 1994, 266:771-773,
		LERCEL, et al. "Self-assembled monolayer electron-beam resists on GaAs and SiO ₂ " J. Vac. Sci. Technol. B., 1993, 11(6): 2823-2828.
		LERCEL, et al., "Sub-10nm lithography with self-assembled monolayers" Appl. Phys. Lett., 1996, 68(11):1504-1506.
		LI, Y. et al., "Electrochemical AFM "Dip-Pen" Nanolithography" J. Am. Chem., Soc. 2001, 123:2105-2106.
		LIU, et al., "Nanofabrication of self-assembled monolayers using scanning probe lithography" Acc. Chem. Res., 2000, 33(7):457-466.
+		LO, et al., "Organic and inorganic contamination on commercial AFM cantilevers" Langmuir, 1999, 15:6522-6526.

				/
Examiner Signature		Date Considered	12/10/	06
	 			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for t	form 1449B/PTO				Complete if Known	
300311010 101 1	0/11/14/2011/0			Application Number	10/541,013	
INFOR	MATION	DISCL	OSURE	Filing Date	June 28, 2005	
STATE	EMENT B	Y APPL	ICANT	First Named Inventor	Eric Henderson	
O I	32.3			Group Art Unit	1641	
	(use as many shee	ets as necessary)	Examiner Name	Unknown	
Sheet 15 of 28		Attorney Docket Number	016348-9048-US00			

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
X) .	LÜTHI, et al., "Parallel nanodevice fabrication using a combination of shadow mask and scanning probe methods: Applied Physics Letters, 1999, 75(9):1314-1316.
		LUTWYCHE, et al., "5X5 2D AFM cantilever arrays a first step toward Terabit storage device" Sensors and Actuators, 1999, 73:89-94.
		LYNCH, M., et al., "A Reliable Preparation Method for Imaging DNA by AFM" Microscopy Today, 1999, 99(9) 1 pg.
		LYUBCHENKO, Y.L., et al., "Atomic force microscopy of DNA and bacteriophage in air, water and propanol: The role of adhesion forces" Nuc. Acids Res., 1993, 21(5):1117-1123.
		MACAYA, et al., "Thrombin-binding DNA aptamer forms a unimolecular quadruplex structure in solution" PNAS USA, April 1993, 90:3745-3749.
		MacBEATH, G. and SCHREIBER, S.L., "Printing Proteins as Microarrays for High-Throughput Function Determination" Science, 8 September 2000, 289:1760-1763.
		MAGNO, R., BENNETT, B., "Nanostructure patterns written in III-V semiconductors by an atomic force microscope" <i>Applied Physics Letters</i> , 1997, 70(14):1855-1857.
		MALMBORG, et al., "Real Time Analysis of Antibody-Antigen Reaction Kinetics", Scand. J. Immunol., 1992, 35:634-650.
A	•	MARSH, T.C., et al., "A new DNA nanosctructure imaged by scanning probe microscopy" Nuc. Acids Res. 1995, 23(4):696-700.

	1 /	/			
Examiner Signature	1/XI		Date Considered	12/10/	06

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for f	orm 1449B/PTO			Complete if Known		
Judaniale for i	0/11/14/2011/0			Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT				First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	16	of	28	Attorney Docket Number	016348-9048-US00	

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
Q	>	MARSH, T.C., et al., "G-wires: Self-assembly of a telometic oligonucleotide, d(GGGGTTGGGG), into large superstructures" <i>Biochemistry</i> 1994, 33:10718-10724.
		MARTIN, B., et al., "Ortogonal Self-Assembly on Colloidal Gold-Platinum Nanorods" Advanced Materials, 1999, 11:1021.
	·	MATTEUCCI, et al., "Synthesis of deoxyoligonucleotides on a polymer support 1" J. Am. Chem. Soc., 1981, 103:3185-3191.
		MAYNOR, et al., "Au :Ink" for AFM "Dip-Pen" Nanolithography" Langmuir, 2001, 17:2575-2579.
		MAZZOLA, L., "Discrimination of DNA hybridization using chemical force microscopy" <i>Biophysical Journal</i> , 1999, 76:2922-2933.
		MAZZOLA, L., "Imaging biomolecule arrays by atomic force microscopy" <i>Biophysical Journal</i> , 1995, 68:1653-1660.
		MEISTER, et al., "Nanoscale Dispensing of Liquids through Cantilevered Probes" MNE '02, Lugano, Switzerland, 16-19 September 2002.
		MENDOZA, et al., "High-Throughput Microarray-Based Enzyme-Linked Immunosorbent Assay (ELISA)" BioTechniques, 1994, 27(4):778-788.
		MEYER, G. and N.M. AMER, "Novel optical approach to atomic force microscopy" Appl. Phys. Lett., 1988, 53:1045-1047.

		 		1	
Examiner Signature	Cu	Date Considered	12/	10/06	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for f	orm 1449B/PTO			Complete if Known		
Substitute to 1	0111147557110			Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT				First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
	(use as many she	ets as necessary)	•	Examiner Name	Unknown	
Sheet	17	of	28	Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
P	MINNE, et al., "Centimeter scale atomic force microscope imaging and lithography" Applied Physics Letters, 1998, 73(12):1742-1744.
Į .	MINNE, S.C., et al., "Automated parallel high-speed atomic force microscopy" Appl. Phys. Lett., 1998, 72(18):2340-2342.
	MIRKIN, et al., "Dip-Pen Nanolithography: Controlling Surface Architecture on the Sub-100 Nanometer Length Scale" Chemphyschem, 2001, 2:37-39.
	MIRKIN, et al., "Programming the Assembly of Two- and Three-Dimensional Architectures with DNA and Nanoscale Inorganic Building Blocks" Invited Contribution from Recipient of ACS Award in Pure Chemistry" Inorg. Chem., 2000, 39:2258-2272.
	MOSHER, C., et al., "NanoArrays, The Next Generation Molecular Array Format for High Throughput Proteomics, Diagnostics and Drug Recovery" JALA, 2000, 5(5):75-83.
	MOY, et al., "Intermolecular Forces and Energies Between Ligands and Receptors" Science, 1994, 266:257-259.
	MOY, V.T., et al., "Probing the forces between complimentary strands of DNA with the atomic force microscope" SPIE, 1995, 2384:2-12.
	MUELLER, et al., "Atomic force microscopy deposition of poly-1-lysine structures onto lipid bilayers supported by mica" "Langmuir, 2000, 16:9568-9570.
7	MÜLLER, et al., "Nanostructuring of alkanethiols with ultrastrap field emitters" J. Vac. Sci. Technol. B., 1995, 13(6):2846-2849.

		1 1				
Examiner Signature	(hi	1	Date Considered	12/	10/0	6

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for f	orm 1449B/PTO				Complete if Known	
Substitute for it				Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATE	MENT E	Y APPL	ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
	(use as many she	ets as necessary)		Examiner Name	Unknown	
Sheet 18 of 28				Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
	MURRAY, et al., "Atomic force microscopy of biochemically tagged DNA" Proc., Natl., Acad. Sci., 1993, 90:3811-3814.
	MUSIL, C., "Nanostructuring of gold electrodes for immunosensing applications: J. Vac. Sci. Technol. B., 1995, 13(6):2781-2786.
	NIU, et al., "Atomic force microscopy of DNA-colloidal gold and DNA-protein complexes" SPIE Advances in DNA Sequencing Technology, 1993, 1891:71-77.
	NOY, et al., "Chemical force microscopy: exploiting chemically-modified tips to quantify adhesion, friction, and functional group distributions in molecular assemblies" J. Am. Chem., 1995, 117:7943-7951.
	NOY, et al., "Chemically-sensitive imaging in tapping mode by chemical force microscopy: relationship between phase lag adhesion" <i>Langmuir</i> , 1998, 14:1508-1511.
	NUZZO, R., "Spontaneously organized molecular assemblies. 3. Preparation and properties of solution adsorbed monolayers of organic disulfides on gold surfaces" J. Am. Chem. Soc., 1987, 109:2358-2368.
	NYFFENEGGER, et al., "Nonometer scale surface modification using the scanning probe microscope: progress since 1991" Chem. Rev., 1997, 97:1195-1230.
	O'BRIEN, J., et al., "Immunosensing Platforms Using Spontaneously Absorbed Antibody Fragments on Gold" Analytical Chemistry, 2000, 72(4)703-710 [PMID 10701253] Abstract.
	OSHIO, T. et al., "Atomic force microscopy detection system using an optical fiber heterodyne interferometer free from external disturbances" Ultramicroscopy 42-44 (July 1992) 310-314.

Examiner Signature	Cha	982	Date Considered	12/10/06	
					

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for form 1449B/PTO					Complete if Known	
				Application Number	10/541,013	
INFOR	MATION	N DISCLO	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT				First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	19	of	28	Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
2	PAWELETZ, et al., "Reverse phase protein microarrays which capture disease progression shoe activation of prosurvival pathways at the cancer invasion front" Oncogen, 2001, 20:1981-1989.
	PAWLAK, et al., "Zeptosens' protein microarrays: A novel high performance microarray platform for low abundance protein analysis" <i>Proteomics</i> , 2002, 2:383-393.
	PERKINS, et al., "Fabrication of 15 nm wide trenches in Si by vacuum scanning tunneling microscope lithography of an organosilane self-assembled film and reactive ion etching" Appl. Phys. Lett., 1996, 68(4):550-552.
	PFANNSCHMIDT, et al., "Sequence-specific labeling of superhelical DNA by triple helix formation and psoralen crosslinking" Nucleic Acids Research, 1996 24(9):1702-1709.
-	PINER, et al., "Improved imaging of soft materials with modified AFM tips" Langmuir, 1999, 15:5457-5460.
	PINER, R.D., et al., "Dip-Pen Nanolithography" Science, January 29, 1999,283(5402):661-663.
	PINER, Richard, "Effect of water on lateral force microscopy in air" Langmuir, 1997, 13:6864-6868.
	PUTNAM, C.A.J., "Tapping atomic force microscopy in liquids" Appl. Phys. Lett., 1994, 64(18):2454-2456.
×	QIN, et al., "Fabrication of ordered two-dimensional arrays of micro- and nanoparticles using patterned self-assembled monolayers as templates: Adv. Matter, 1999, 11(17):1433-1437.

_	/) i_	1	· · · · · · · · · · · · · · · · · · ·		1	
Examiner Signature	1.7		Date Considered	12	// 8/	08

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTO/SB/08B

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for f	orm 1449B/PTO		<u> </u>		Complete if Known	
303,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0			Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATE	MENT E	BY APPL	ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
	(use as many sho	ets as necessary))	Examiner Name	Unknown	
Sheet	20	of	28	Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
	RANKIN, P.C. WILSON, A.T. "The Surface Chemistry of the Mica-Aluminum-Sulfate System" Journal of Colloid and Interface Science, (1969) 30(3):277-282.
	REED, et al., "Conductance of molecular junction" Science, 1997, 278:252-254.
	RIEF, et al., "Reversible unfolding of individual Titin Ig-domains by AFM" Science, 1997, 276:1109-1111.
	RIEF, M., et al., "Single Molecule Force Spectroscopy on Polysaccharides by Atomic Force Microscopy" Science, 1997, 275:1295-1297.
·	RIEF, M., et al., "The mechanical stability of immunoglobulin and fibronectin III domains in the muscle protein titin measured by atomic force microscopy" <i>Biophysical Journal</i> , 1998, 3008-3014.
	ROBINSON, et al., Autoantigen microarrays for multiplex characterization of autoantibody responses" Nature Medicine, March 2002, 8(3):1-7.
	SANTOS, et al., "Probing hydrophobic interactions of surfaces and macromolecules with atomic force microscope" Book of Abstracts, 214 ACS National meeting, September 7-11, 1997, PHYS-248.
	SASTRY, et al., "Formation of patterned hetrocolloidal nanoparticle thin films" Langmuir, 2000, 16:3553-3556.
	SCHAUS, S., et al., "Cell Viability and Probe-Cell Membrane Interactions of XR1 Glial Cells Imaged by Atomic Force Microscopy" Biophysical Journal, September 1997, 73:1205-1214.

Examiner Signature	Cu Ho	Date 12	10/06
	7 7 2 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTO/SB/08B

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

					Complete if Known	
Substitute for form 1449B/PTO				Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATE	EMENT B	Y APPL	ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
	(use as many she	ets as necessary))	Examiner Name	Unknown	
Sheet	21	of	28	Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
	SCHENA, et al., "Parallel human genome analysis: Microarray-based expression monitoring of 1000 genes" PNAS USA, 1996, 93:10614-10619.
	SCHENA, M., Microarray Biochip Technology, Eaton Publishing, Natick, MA 2000.
	SCHOER, et al., "Scanning probe lithography. 4. Characterization of scanning tunneling microscope-induced patterns in n-Alknethiol self-assembled monolayers" Langmuir, 1997, 13:2323-2332.
	SCHUMACHER, et al., "Nanomachining of mesoscopic electronic devices using an atomic force microscope" Applied Physics, 1999, 75(8):1107-1109.
	SCHWARTZ, et al. "Meniscus Force Nanografting: Nanoscopic Patterning of DNA" Langmuir, 2001, 17:5971-5977.
	SCHWARTZ, et al., "Molecular Transport from an Atomic Force Microscope Tip: A Comparative Study of Dip- Pen Nanolithography" Langmuir, American Chemical Society, November 6, 2001
	SCHWEITZER, et al., "Multiplexed protein profiling on microarrays by rolling-circle amplification" Nature Biotechnology, April 2002, 20:359-365.
	SHAIU, W.L., et al., "Atomic Force Microscopy of Oriented Linear DNA Molecules Labeled with 5nm Gold Spheres" Nuc. Acids Res., 1993, 21(1):99-103.
1	SHAIU, W.L., et al., "Visualization of circular DNA molecules labeled with colloidal gold spheres using atomic force microscopy" J. Vac. Sci. Technol. A., 11(4):820-823.

Examiner Signature	1/1/2	Date Considered	12/10	/06
			7	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for f	orm 1449B/PTO				Complete if Known	
Substitute for it				Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATE	MENT B	SY APPL	ICANT	First Named Inventor	Eric Henderson	
012				Group Art Unit	1641	
(use as many sheets as necessary) Examiner Name Unknown						
Sheet	22	of	28	Attorney Docket Number .	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
Z/	SHEEHAN, et al., "Thiol diffusion and the role of humidity in "dip pen" nanolithography" Physical Review Letters, 15 April 2002, 88(15):156104-1-156104-4.
	SHEEN, et al., "A new class of organized self-assembled monolayers: alkane thiols on GaAs (100)" J. Am. Chem. Soc., 1992, 114:1514-1515.
	SHERMAN, Chemical Vapor Deposition For Microelectornices: Principles, Technology and Applications (Noyes, Park Ridges, NJ, 1987).
	SHLYAKHTENKO, L.S., et al., "Structure and dynamics of supercoil-stabilized DNA cruciforms" J. Mol. Biol., 1998, 280(1):61-72.
	SHLYAKHTENKO, L.S., GALL, A.A., et al., "Atomic force microscopy imaging of DNA covalently immobilized on a functionalized mica substrate" Biophysical Journal, July 1999, 77:568-576.
	SILZEL, et al., "Mass-sensing, multianalyte microarray immunoassay with imaging detection" Clinical Chemistry, 1998, 44(9):2036-2043.
	SMITH et al., "Overstretching B-DNA: the elastic response of individual double-stranded and single stranded DNA molecules" Science, 9 February 1996, 271:795-799.
	SNOW, et al., "High speed patterning of a metal silicide using scanned probe lithography" Applied Physics Letters, 1999, 75(10):1476-1478.
V	SOH, H., et al., "Integrated nanotube circuits: controlled growth and ohmic contacts to single-walled-carbon nanotubes" Appl. Phys. Letts., 1999, 75(5): 627-629.

Examiner Date Date		·		
Signature Considered 12/19/00	a	1 -	2/10	106

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for f	orm 1440B/PTO				Complete if Known	
Substitute for form 1449B/PTO				Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	Filing Date June 28, 2005	
STATE	MENT B	Y APPL	ICANT	First Named Inventor	Eric Henderson	
~~				Group Art Unit	1641	
(use as many sheets as necessary) Examiner Name Unknown						
Sheet	23	of	28	Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
X	SONDAG-HUETHORST, et al., "Generation of electrochemically deposited metal patterns by means of electron beam (nano)lithography of self-assembled monolayer resists" Appl. Phys. Lett. 1994, 64(3):285-287.
	SOUTHERN, E.M., "Detection of specific sequences among DNA fragments separated by gel electrophoresis" J. Mol. Biol. 1975, 98:503-517.
	Spectroscopy Europe - News February/March 2002, 6 pages, http://www.spectroscopyeurope.com/news14_1.html
	SPENCE, J., WEIERSTALL, U., et al., " Atomic species identification in scanning tunneling microscopy by time of flight spectroscopy" J. Vac. Sci. Tech., 1996, B14(3):1587-1590.
	SREEKUMAR, et al., "Profiling of cancer cells using protein microarrays: Discovery of novel radiation-regulated proteins" Cancer Research, 2001, 61:7585-7593.
	STEINER, et al., "Adsorption of alkanenitriles and alkanedinitriles on gold and copper" Langmuir, 1992, 8:2271-2777.
	STÖCKLE, R., SETZ, P. "Nanoscale Atmospheric Pressure Laser Ablation-Mass Spectrometry" Anal. Chem., 2001, 73(7):1399-1402.
	SU, et al., "Moving beyond Molecules: Patterning Solid-State Features via Dip-Pen Nanolithography with Sol-Based Inks" JACS, 2002, 124(8):1560-1561.
X	SUN, et al., "Nanoscale Molecular Patterns Fabricated by Using Scanning Near-Field Optical Lithography" JACS, 2002, 124(11):2414-2415.

Examiner			Date / D
Signature	1/1	YA	Considered / 2/10/06

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for fi	orm 1/40B/PTO				Complete if Known	
Substitute for form 1449B/PTO				Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT				First Named Inventor	Eric Henderson	
OTTENDENT DI III DI CIII I				Group Art Unit	1641	
	(use as many she	ets as necessary)	•	Examiner Name	Unknown	
Sheet	24	of	28	Attorney Docket Number	016348-9048-US00	

L			OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
	miner itials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
		7	TANG, K., FU, D., et al., "Matrix-assisted laser desorption/ionization mass spectrometry of immobilized duplex DNA probes" <i>Nucleic Acids Research</i> , 1995, 23(16):3126-3131.
			TANS, et al., "Room-temperature transistor based on a single carbon nanotube" Nature, 7 May 1998, 393:49-52.
			TARLOV, M.J., NEWMAN, J.G., et al., "Static secondary ion mass spectrometry of self-assembled alkanethiol monolayers on gold" <i>Langmuir</i> , 1992, 8:1398-1405.
			TIEN, et al., "Microfabrication through electrostatic self-assembly" Langmuir, 1997, 13:5349-5355.
٠			TROUGHTON, E., BAIN, C., et al., "Monolayer films prepared by the spontaneous self-assembly of symmetrical and unsymmetrical dialkyl sulfides from solution onto gold substrates: Structure, properties and reactivity of constituent functional groups" Langmuir, 1988, 4:365-385.
			TSUKAMOTO, et al. "Twin-probe scanning tunneling microscope" Rev. Sci. Instrum., July 1991, 62(7):767-1771.
			UETZ, P., et al., "A comprehensive analysis of protein-protein interactions in Saccharomyces cerevisiae" Nature, 10 February 2000, 403(6770):623-627.
			ULMAN, Abraham, "Formation and structure of self-assembled monolayers" Chem. Rev., 1996, 96:1533-1554.
>	7		ULMAN, An Introduction To Ultrathin Organic Films: From Langmuir-Blodgett to Self-Assembly (Academic, Boston 1991) (Alkanethiols on gold).

Examiner Signature Date Considered 1 2 / 10 / 0			[a_	 	12	
	Examiner Signature	(A	La	12/	10/0	0 (

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for	form 1449R/PTO				Complete if Known	
Substitute for form 1449B/PTO				Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT				First Named Inventor	Eric Henderson	
04.14.2				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	25	of	28	Attorney Docket Number	016348-9048-US00	

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
a	7	VESENKA, J. et al., "A substrate preparation for reliable imaging of DNA molecules with the scanning force microscope" <i>Ultramicroscopy</i> , 1992, 42-44:1243-1249.
(,		VESENKA, J., et al., "Colloidal gold particles as an incompressable atomic force microscope imaging standard for assessing the compressability of biomolecules" <i>Biophys. J.</i> , 1993, 65:992-997.
		VESENKA, J., et al., "Combining optical and atomic force microscopy for life sciences research" BioTechniques, 1995, 19(2):240-253.
		VETTIGER, et al., "Ultrahigh density, high-data-rate NEMS-based AFM data storage system" Microelectronic Engineering, 1999, 46:11-17.
	·	VEZENOV, Dmitri, "Force titrations and ionization state sensitive imaging of functional groups in aqueous solutions by chemical force microscopy" J. Am. Chem. Soc., 1997, 119:2006-2015.
		VOSSMEYER, et al., "Combinatorial approaches toward patterning nanocrystals" Journal of Applied Pysics, 1998, 84(7):3664.
		WADU-MESTHRIGE, et al., "Fabrication and imaging of nanomneter-sized protein patterns" Langmuir, 1999, 15:8580-8583.
		WALLRAFF, et al., "Lithographic imaging techniques for the formation of nanoscopic features" Chem. Rev., 1999, 99:1801-1821.
4		WALTERS, D.A., HAMPTON, A.D., et al. "Atomic force microscope integrated with a scanning electron microscope for tip fabrication" Applied Physics Letters, 8 August 1994, 65(6):787-789.

	\sim			1	-
Examiner Signature	44	Date Considered	12	110	106

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for fe	orm 1449B/PTO				Complete if Known	
Substitute for form (4472)				Application Number	10/541,013	
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT			ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
(use as many sheets as necessary)			•	Examiner Name	Unknown	
Sheet	26	of	28	Attorney Docket Number	016348-9048-US00	

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
O.S.	P	WANG, et al., "Nanometer scale patterning and pattern transfer on amorphous Si, crystalline Si, and SiO ₂ surfaces using self-assembled monolayers" Appl. Phys. Lett., 1997, 70(12):1593-1595.
		WEIERSTALL, U. SPENSE, J. "Atom species identification in STM using an Imaging Atom-Probe technique" Surface Science" 1998, 398: 267-279.
		WHITESIDES, et al., "Self-assembled monolayers and lithography" Nanophase Chemistry 1995, 39: 109-122.
		WILBUR, et al., "Scanning force microscopes can image patterned self-assembled monolayers" Langmuir, 1995, 11:825-831.
		WILLIAMSON, et al., "G-quartets in biology: Reprise" PNAS USA, 15 April 1993, 90(8):3124-3124.
		WILLIAMSON, et al., "Monovalent cation-induced structure of telomeric DNA: The G-quartet model" Cell, 1989, 59(5):871-880.
		WILSON, et al., "Surface organization and nanopatterning of collagen by dip-pen nanolithography" PNAS, November 20, 2001, 98(24):13660-13664.
		WONG, S., et al., "Covalently functionalized nanotubes as nanometre-sized probes in chemistry and biolog" Nature, 1998, 394:52-55.
4	-	WONG, S., et al., "Covalently functionalized single-walled carbon nanotube probe tips for chemical force microscopy" Journal of the American Chemical Society, 1998, 120:8557-8558.

Examiner Signature Date Considered 17/0/06					
	a	9	Var	 12/10	106

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

Substitute for f	om 1449B/PTO				Complete if Known	
Substitute for form 1449B/PTO				Application Number	10/541,013	
INFOR	MATION	N-DISCL	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT (use as many sheets as necessary)			ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
				Examiner Name	Unknown	
Sheet	27	of ·	28	Attorney Docket Number	016348-9048-US00	

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
Q	WONG, S., et al., "Functionalization of carbon nanotube AFM probes using tip-activated gases" Chem Physics Letters, 1999, 306:219-225.
	XIA, et al., "A selective etching solution for use with patterned self-assembled monolayers of alkanethiolates on gold" Chem. Mater., 1995, 7:2332-2337.
	XIA, et al., "Complex optical surfaces formed by replica molding against elastomeric masters" Science, 1996, 273: 347-349.
	XIA, et al., "Pattern transfer: self-assembled monolayers as ultrathin resists" Microelectronic Engineering, 1996, 32:255-268.
	XIA, et al., "Soft lithography" Agnew Chem. Int. Ed., 1998, 37:551-575.
	XIA, et al., "Unconventional methods for fabricating and patterning nanostructures" Chem. Rev., 1999, 99:1823-1848.
	XU, et al., "Fabrication of nanometer scale patterns within self-assembled monolayers by nanografting" Langmuir, 1999, 15:7244-7251.
	XU, et al., "Nanometer-scale fabrication by simultaneous nanoshaving and molecular self-assembly: Langmuir, 1997, 13:127-129.
7	XU, et al., "Wetting and capillary phenomena of water on mica" J. Phys. Chem. B., 1998, 102:540-548.

(
Examiner Signature Date Considered Considered	06	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number. Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary) Sheet

	Complete if Known
Application Number	10/541,013
Filing Date	June 28, 2005
First Named Inventor	Eric Henderson
Group Art Unit	1641
Examiner Name	Unknown
Attorney Docket Number	016348-9048-US00

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
A	YAN, et al. "Patterning a performed, reactive SAM using microcontact printing" J. Am. Chem. Soc., 1998, 120:6179-6180.
	YAN, et al., "Patterning thin films of poly(ethylene imine) on a reactive SAM using microcontact printing" Langmuir, 1999, 15:1208-1214.
	YING, et al., "Programmable Delivery of DNA through a Nanopipet" Anal. Chem., 2002, 74:1380-1385.
	YOUIL, R., "Screening for mutations by enzyme mismatch cleavage with T4 endonuclease VII PNAS USA, 1995, 92(1):87-91.
	ZHONG, Q., et al., "Fractured polymer/silica fiber surface studied by tapping mode atomic force microscopy" Surf. Sci. Lett., January 3, 1993, 290: L 688-L692.
	ZHU, et al., "Analysis of yeast protein kinases using protein chips" Nature Genetics, 2000, 26:283-289.
D	ZHU, et al., "Global Analysis of Protein Activities Using Proteome Chips" Science, September 2001, 293(14):2101-2105.

				·	
Examiner Signature	Sh	Y Van	Date Considered	12/10/06	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Paperwork Reduction Act of 1995, no persons

MADEMATION DIS	or oounn
INFORMATION DIS	CLOSURE
STATEMENT BY A	PPLICANT

Substitute for from 1449/PTO

(use as many sheets as necessary) Sheet 7 of

	liection of information unless it contains a valid OMB control number.				
Complete if Known					
Application Number	10/541,013				
Filing Date	June 28, 2005				
First Named Inventor	Eric Henderson				
Group Art Unit	1641				
Examiner Name	Unknown				
Attorney Docket Number	016348-9048-US00				

U.S. PATENT DOCUMENTS							
Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document				
120	4,728,591	Clark et al.	3/1/1988				
	5,106,729	Lindsay et al.	4/21/1992				
	5,138,174	Tang	8/11/1992				
	5,143,854	Pirrung et al.	9/1/1992				
	5,150,392	Hohn et al.	9/22/1992				
	5,304,487	Wilding et al.	4/19/1994				
	5,314,829	Coles	5/24/1994				
	5,346,683	Green et al.	9/13/1994				
	5,363,697	Nakagawa	11/15/1994				
	5,372,930	Colton et al.	12/13/1994				
	5,384,261	. Winkler et al.	1/24/1995				
	5,440,122	Yasutake	8/8/1995				
	5,443,791	Cathcart et al.	8/22/1995				
	5,445,934	Fodor et al.	8/29/1995				
	5,445,971	Rohr, T.	8/29/1995				
	5,453,970	Rust et al.	9/26/1995 .				
	5,467,642	Hosaka et al.	6/9/1998				
	5,472,881	Beebe et al.	12/5/1995				
	5,482,601	Ohshima, et al.	1/9/1996				
	5,514,540	Teoule et al.	5/7/1996				
	5,514,550	Findlay et al.	5/7/1996				
10	5,519,212	Elings et al.	5/21/1996				

Examiner Signature	(e	I Law	Date Considered	12/10/06

EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O: Box Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				Complete if Known		
Substitute for form 1449/F TO				Application Number	10/541,013	
INFORMATION DISCLOSURE				Filing Date	June 28, 2005	
STATEMENT BY APPLICANT			ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
(use as many sheets as necessary))	Examiner Name	r Name Unknown	
Sheet	2	of	7	Attorney Docket Number	016348-9048-US00	

U.S. PATENT DOCUMENTS						
Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document			
ae	5,532,128	Eggers et al.	7/2/1996			
	5,571,639	Hubbell et al.	11/5/1996			
	5,601,982	Sargent et al.	2/11/1997			
	5,604,097	Brenner	2/18/1997			
	5,620,854	Holzrichter et al.	4/15/1997			
	5,666,190	Quate et al.	9/9/1997			
	5,670,322	Eggers et al.	9/23/1997			
	5,688,486	Watson et al.	11/1/8/1997			
	5,720,928	Schwartz	2/24/1998			
	5,744,305	Fodor et al.	4/28/1998			
	5,753,088	Olk, C.	5/19/1998			
	5,760,300	Kajimura, H.	6/2/1998			
	5,763,768	Henderson et al.	6/9/1998			
	5,789,167	Konrad	8/4/1998 -			
	5,800,992	Fodor et al.	9/1/1998			
	5,804,445	Brasier	9/8/1998			
	5,837,832	Chee et al.	11/17/1998			
	5,840,862	Bensimon et al.	11/24/1998			
	5,846,724	Bensimon et al.	12/8/1998			
	5,851,769	Gray et al.	12/22/1998			
	5,866,328	Bensimon et al.	2/2/1999			
4	5,866,434	Massey et al.	2/2/1999			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				Complete if Known		
Substitute for form 1449/F 10				Application Number	10/541,013	
INFORMATION DISCLOSURE				Filing Date	June 28, 2005	
STATEMENT BY APPLICANT			ICANT	First Named Inventor	Eric Henderson	
				Group, Art Unit	1641	
(use as many sheets as necessary)				Examiner Name Unknown		
Sheet	3	of	7	Attorney Docket Number	016348-9048-US00	

U.S. PATENT DOCUMENTS							
Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document				
00	5,874,219	Rava et al.	2/23/1999				
	5,874,668	Xu et al.	2/23/1999				
	5,965,133	Cantor et al.	10/12/1999				
	5,981,733	Gamble et al.	11/9/1999				
	5,985,356	Schultz et al.	11/16/1999				
	5,992,226	Green et al.	11/30/1999				
- ·	5,993,627	Anderson et al.	11/30/1999				
	6,004,617	Schultz et al.	12/21/1999				
	6,024,925	Little et al.	2/15/2000				
	6,033,911	Schultz et al.	3/7/2000				
	6,045,671	Wu et al.	4/4/2000				
	6,080,586	Baldeschwieler et al.	6/27/2000				
	6,083,763	Balch	7/4/2000				
	6,087,274	Tonucci et al.	7/11/2000				
	6,110,426	Shalon et al.	8/29/2000				
	6,123,819	Peeters	9/26/2000				
	6,143,574	Karlsson et al.	11/7/2000				
	6,146,899	Porter et al.	11/14/2000				
	6,159,742	Lieber et al.	12/12/2000				
	6,171,797 B1	Perbost	1/9/2001				
	6,180,114	Yager	1/30/2001				
2	6,200,737	Walt et al.	3/13/2001				

	Examiner Signature		I X 2	Date Considered	12/10/00	Ś .
--	-----------------------	--	-------	--------------------	----------	-----

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO					Complete if Known	
				Application Number	10/541,013	
INFOR	INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Filing Date	June 28, 2005	
STATE				First Named Inventor	Eric Henderson	
02			20	Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	4	of	7	Attorney Docket Number	016348-9048-US00	

U.S. PATENT DOCUMENTS							
Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document				
	6,203,814 B1	Fisher et al.	3/20/2001				
	6,210,910	Walt et al.	4/3/2001				
	6,214,552	Heroux, et al.	4/10/2001				
	6,218,122	Friend et al.	4/17/2001				
	6,231,744 B1	Ying et al.	5/15/2001				
	6,232,706 B1	Dai et al.	5/15/2001				
	6,239,273 B1	Pease et al.	5/29/2001				
	6,255,469	Seeman et al.	7/3/2001				
	6,270,946	Miller	8/7/2001				
	6,278,231 B1	Iwasaki et al.	8/21/2001				
71	6,284,497 B1	Sabanayagam et al.	9/4/2001				
	6,287,850 B1	Besemer et al.	9/11/2001				
	6,289,717	Thundat et al.	9/18/2001				
	6,309,831 B1	Goldberg et al.	10/30/2001				
	6,329,209 B1	Wagner et al.	12/11/2001				
	6,331,396 B1	Silverman	12/18/2001				
	6,346,189	Dai et al.	2/12/2002				
	6,350,609	Morozov et al.	2/26/2002				
	6,395,554	Regan et al.	5/28/2002				
	6,406,921 B1	Wagner et al.	6/18/2002				
	6,416,952	Pirrung et al.	7/9/2002				
\$	6,420,105	Landfield et al.	7/16/2002				

Examiner Signature	1 Alan	Date Considered	12/10/06
-----------------------	--------	--------------------	----------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for f	Substitute for form 1449/PTO				Complete if Known	
Substitute for form 1449/F TO				Application Number	10/541,013	
INFOR	MATION	N DISCLO	OSURE	Filing Date	June 28, 2005	
STATE	STATEMENT BY APPLICANT			First Named Inventor	Eric Henderson	
02				Group Art Unit	1641	
(use as many sheets as necessary)				Examiner Name	Unknown	
Sheet	5	of	7	Attorney Docket Number	016348-9048-US00	

U.S. PATENT DOCUMENTS							
Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document				
00	6,436,647 B1	Quate et al.	8/20/2002				
	6,518,168	Clem et al.	2/11/2003				
	6,573,369	Henderson et al.	6/3/2003				
	6,635,311	Mirkin et al.	10/21/2003				
	6,722,395	Overbeck	4/20/2004				
	2002/0042081	Henderson et al.	4/11/2002				
	2002/0063212	Mirkin et al.	5/30/2002				
	2002/0076927	Henderson et al.	6/20/2002				
	2002/0114987	Oscarsson et al.	8/22/2002				
	2002/0122873	Mirkin et al.	9/5/2002				
	2002/0123135	Henderson et al.	9/5/2002				
	2002/0146714	Lieber et al.	10/10/2002				
	2002/0172943	Henderson et al.	11/21/2002				
	2002/0179434	Dai et al.	12/5/2002				
	2002/0179434	Dai et al.	12/5/2002				
d	2003/0013111	Henderson et al.	1/16/2003				

		F	OREIGN PATENT DOCUME	ENTS			
Examiner Initials	Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publicat Docum		Translation	English Abstract
Palat	1-918	8094646	SHIMADZU CORP	4/12/19	996		,
Patric	141.00kg	7027771	HITACHI LTD.	1/31/19	95		
Examiner Signature		04		Date Considered	12/1	0/06	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for fo	om 1449/PTO				Complete if Known	
Substitute for the	01111 1 47/1 1 O			Application Number 10/541,013		
INFOR	MATION	N DISCL	OSURE	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT (use as many sheets as necessary)			ICANT	First Named Inventor	Eric Henderson	
				Group Art Unit	1641	
)	Examiner Name	Unknown	
Sheet	6	of	7	Attorney Docket Number	016348-9048-US00	

						U.S. PA	TENT DOCUMENTS	S			·
	xeminer Initials	U.S. Patent Document Number			U.S. Patent Document Nur	nber	Name of Patentee or Applicant of Cited Document			Date of Publication of Cited Document	
F						FOREIGN	PATENT DOCUME	NTS			
	ixaminer Initials	Country Foreign Patent Document Code Number A		1	me of Patentee or ant of Cited Document	Date of Publication of Cited Document		Translation	English Abstract		
Z	ilis	ref	A, 19		6124680		JEOL LTD.	1994			
Z			wc	5	92/15709	ABBOT	TT LABORATORIE	9/17/199	2		
		Г	wo	5	96/31775	. (OSCARSSON	10/10/199	96		
Г	1	WO 97/06420 .		·	BENSIMON	2/2/1997	,				
Г	1	Г	WO 97/18326 -		PAST	EUR INSTITUTE	5/22/199	7			
			wc	W/O 08/05020			AM MARSH RICE RSITY (COLBERT)	2/12/1998			
	1		wo)	98/18959	PAST	EUR INSTITUTE	INSTITUTE 5/7/1998			
Г			wo	5	99/31267 .	99/31267 . SEPRACOR INC.		6/24/1999			
	1		wo		99/44063 -	. 9/2/		9/2/1999)		
Г	1		wo)	00/04382	2 ZYOMYX, INC.		1/27/2000			
			wc)	00/04389	Z	YOMYX, INC.	1/27/2000			
			wc	5	00/04390	Z'	YOMYX, INC.	1/27/2000			
			wc)	00/36136	PALATI	N TECHNOLOGIES, INC.	6/22/200	0		
			wc)	00/41213		RTHWESTERN JNIVERSITY	7/13/2000			
Г			wc)	00/46406	ALI	PHAGENE, INC.	8/10/200	0		
		WO 01/60316		osc	ARSSON, SVEN	8/23/200	1				
			wc		01/918555	Ţ	RTHWESTERN JNIVERSITY	12/6/2001			
	7		wc)	03/001633		RTHWESTERN JNIVERSITY				
S	examin Signatu	re	D. I-	it al	if reference considered, wh	ather or no	t citation is in conforma	Date Considered	12/12		itation if

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Complete if Known Substitute for form 1449/PTO Application Number 10/541,013 INFORMATION DISCLOSURE Filing Date June 28, 2005 First Named Inventor Eric Henderson STATEMENT BY APPLICANT Group Art Unit 1641 (use as many sheets as necessary) **Examiner Name** Unknown Attorney Docket Number 016348-9048-US00 Sheet

			U.S. PATENT DOCUMENT	S			
Examiner Initials		U.S. Patent Document Num	•	Name of Patentee or Applicant of Cited Document		Date of Publication of Cited Document	
<u> </u>			FOREIGN PATENT DOCUME	NTS			
Examiner Initials	Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document		Translation	English Abstract
12	wo	03/036767	UNIVERSITY OF ILLINOIS	5/1/2003			
1	wo	03/038033	NORTHWESTERN UNIVERSITY	5/8/2003			
	wo	03/048314	MIRKIN	6/12/2003			
4	wo	03/052514	NORTHWESTERN UNIVERSITY	6/26/2003			

Examiner Signature	a	Lagur	Date Considered	12/10/06

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.

PTO/SB/08B

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE or the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB number.

INFORMATION DISCLOSURE

10F 1 0 500E

Complete if Known

Application Number 10/541,013

Filing Date June 28, 2005

First Named Inventor Eric Henderson

Group Art Unit 1641

Examiner Name Unknown Law

Attorney Docket Number 016348-9048-US00

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS							
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.							
00	"FluoSpheres Fluorescent Microspheres - Product Information," Molecular Probes, Invitrogen Detection Technologies (2005) retrieved from the Internet: http://probes.invitrogen.com/media/pis/mp05000.pdf (XP-002378381)							
R	HOWLAND, R. et al., "A Practical Guide to Scanning Probe Microscopy," Thermomicroscopes (2002) retrieved from Internet: http://web.mit.edu/cortiz/www/AFMGallery/PracticalGuide.pdf (XP-002377197)							
P	LI, S. et al., "Regression of tumors by IFN-α electroporation gene therapy and analysis of the responsible genes by cDNA array," Gene Therapy (2002) 9:390-397							
RP	MCKENDRY, R. et al., "Multiple label-free biodetection and quantitative DNA-binding assays on a nanomechanical cantilever array," PNAS (2002) 99(15):9783-9788							
N	NISHIDA, S. et al., "Combination of AFM with an objective-type total internal reflection fluorescence microscope (TIRFM) for nanomanipulation of single cells," Ultramicroscopy (2002) 91:269-274							
10	OAK RIDGE NATIONAL LABORATORY, "Finding New Uses for Carbon Nanofibers," ORNL Review (2002) 35(3), retrieved from the Internet: http://www.ornl.gov/info/ornlreview/v35_3_02/improving.shtml (XP-002377196)							
2	PEREIRA, R., "Atomic force microscopy as a novel pharmacological tool," Biochem. Pharma (2001) 62:975-983							
	VO-DINH, T. et al., "Antibody-based nanoprobe for measurement of a fluorescent analyte in a single cell," Nature Biotech. (2000) 18:764-767							
CO	WU, G. et al., "Origin of nanomechanical cantilever motion generated from biomolecular interactions," PNAS (2001) 98(4):1560-1564							

Examiner Signature	Cli	1 April	Date Considered	12/18/01

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ne Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

LUBELITY OF FORM 1 449/PTO	Complete if Known		
INFORMATION DISCLOSURE	Application Number	10/541,013	
	Filing Date	June 28, 2005	
STATEMENT BY APPLICANT	First named Inventor	Eric Henderson	
·	Group Art Unit	1641	
(use as many sheets as necessary)	Examiner name	Linknown Law	
Sheet lof l	Attorney Docket Number	016348-9048-US00	

Examiner Initials	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
01	6,395,562	Hammock et al.	5/28/2002
	2001/044106	Henderson et al.	11/22/2001
QU	2002/164656	Hoeffler et al.	11/7/2002
1.0	2003/0228695	Nakamura et al.	12/11/2003
	·		

	FOREIGN PATENT DOCUMENTS								
Examiner Initials	Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Translation	English Abstract			
12	EP	1063287	Karube et al.	12/27/2000					
Q	wo	02/31183	Bioforce Laboratory, Inc.	4/18/2002					
					311				

Examiner Signature	124	Le .	Date Considered	12/10/06

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer. Patent and Trademark Office, Washington, DC 0231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box Alexandria, VA 22313-1450.